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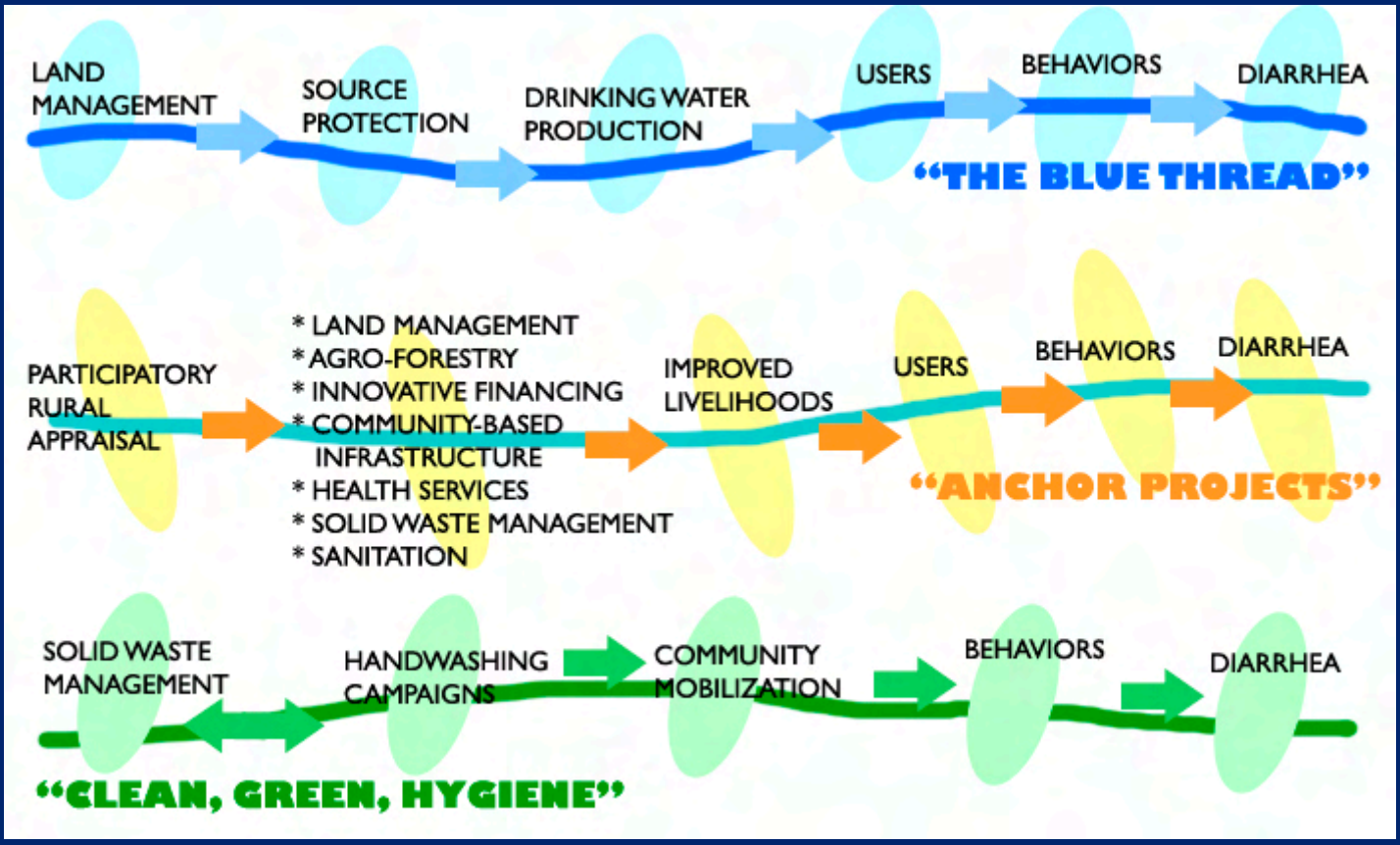
ENVIRONMENTAL SERVICES PROGRAM

STRENGTHENING INTEGRATION: ENVIRONMENTAL SERVICES AND HEALTH OUTCOMES



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Cover illustration: Ardita R. Çaesari, ESP Jakarta/West Java based on Christopher McGahey's schemes.

Options for integration: "The Blue Thread", "Anchor Projects" and "Clean, Green, Hygiene" are several opportunities for integration which is identified in order to achieve greater health impact by integrating ESP's current activities. This report explores more on these opportunities.

STRENGTHENING INTEGRATION: ENVIRONMENTAL SERVICES AND HEALTH OUTCOMES

Title:	**Strengthening Integration: Environmental Services and Health Outcomes.**
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LIST OF ACRONYMS

BHS	Basic Health Services
ESP	Environmental Services Program
HIF	Hygiene Improvement Framework
HSP	Health Services Program
JHU/CCP	Johns Hopkins University/Center for Communication Programs
MMC	Multi-Media Campaign
NGO	Non-Governmental Organization
NRM	Natural Resources Management
PDAM	*Perusahaan Daerah Air Minum* (Local Government-Owned Drinking Water Company)
PMP	Performance Monitoring Plan
POC	Public Outreach and Communication
POU	Point-of-Use
SD	Service Delivery
SO	Strategic Objective
SWS	Safe Water Systems Project
TOT	Training of Trainers
USAID	United States Agency for International Development
WATSAN	Water and Sanitation
WSM	Watershed Management and Biodiversity Conservation

EXECUTIVE SUMMARY

1.1. INTRODUCTION

From February 6-27, 2006, Dr. Christopher McGahey conducted a critical review of USAID/Indonesia's Environmental Services Program (ESP) to identify opportunities to strengthen its contribution to diarrhea prevention, especially for vulnerable women, young children, and poor families. The outputs of the assignment are contained in this report and include recommendations for ESP operations and activities, staff and partner capacity building, and integration with resources from but not limited to USAID/Basic Health Services (BHS) partners.

1.2. OPTIONS FOR INTEGRATION

Numerous opportunities were identified where a greater health impact could be achieved by integrating ESP's current activities. The opportunities are too numerous to list and discuss individually, so clusters of activities were developed that present how more integrated approaches would strengthen the Project's contribution to diarrhea prevention in young children. The full report provides detailed descriptions of five integrated approaches intended to guide ESP's activity analysis and design:

1. The Blue Thread	2. Clean, Green, and Hygiene
3. Hardware Follows Software	4. Anchor Projects

5. Risk Areas – Risked Focus

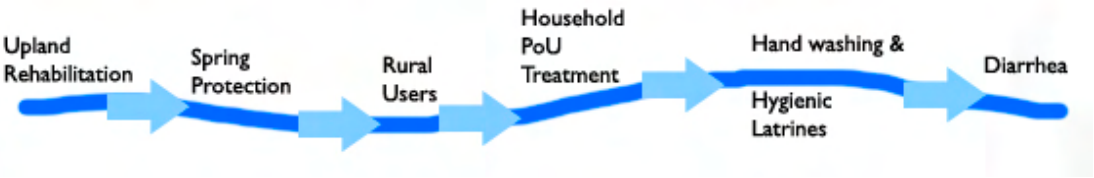
Each approach is viable in ESP's current project locations, and many of the approaches have been initiated. But, none have been comprehensively implemented to achieve diarrheal disease reduction.

THE BLUE THREAD. In the Blue Thread approach, land management activities aimed at water source protection are integrated with household water treatment and hygiene behavior change communication among users of the water to prevent diarrhea as shown below. Key hygiene behaviors include:

- Safe collection and storage of drinking water;
- Safe disposal of the feces of children under the age of five; and
- Handwashing using appropriate technique at critical times.

ESP can apply the Blue Thread approach in urban and rural locations. In urban settings, the approach links municipal source protection with PDAM capacity-building, household water treatment, and hygiene behavior change to reduce diarrhea among the urban poor.

In rural areas, land rehabilitation to protect a water source would be integrated with household treatment and hygiene behavior change among water users.

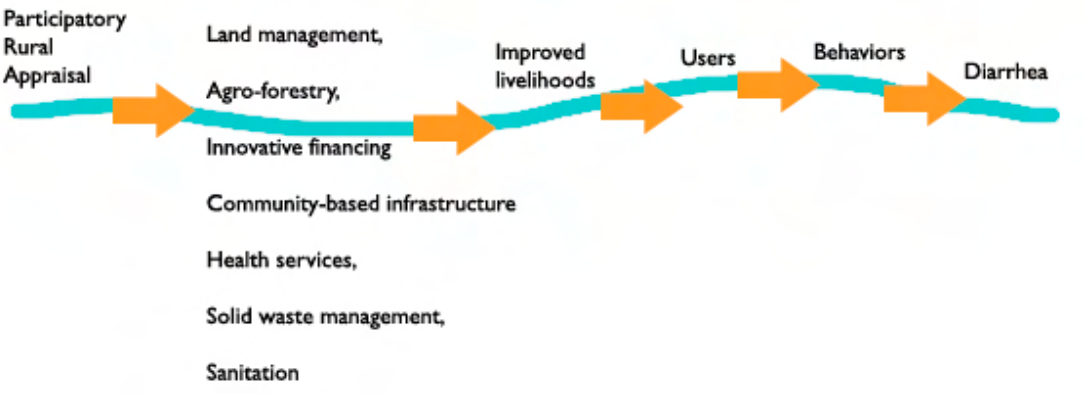


CLEAN, GREEN, AND HYGIENE. This approach optimizes the synergies created between solid waste management and hand washing to prevent diarrhea. In the Clean, Green, and Hygiene approach, community clean up and behavior change communication on the key diarrhea-preventing behaviors would be integrated:

This approach is applicable among the urban poor or could be applied as part of municipal water source protection under an Urban Blue Thread scenario.

"HARDWARE FOLLOWS SOFTWARE". "Hardware follows software" is well understood by water supply and sanitation professionals. It means that community infrastructure ("hardware") is never constructed until the benefiting community is prepared to own, operate, hygienically use, and make decisions ("software") regarding the improved infrastructure. ESP has several activities where small-scale sanitation systems are the entry point to working with communities. None of these however is also addressing behaviors related to the hygienic use of the improved infrastructure. Failure to ensure the hygienic use of infrastructure could threaten rather than improve health of the urban poor.

ANCHOR PROJECTS. In Anchor Projects, the full range of expertise available to ESP – including health services facilitated by HSP - would be directed at a single community to enable its comprehensive transformation and development. In this approach, the findings of Participatory Rural Appraisals (PRAs) serve as the flexible entry point to the community.



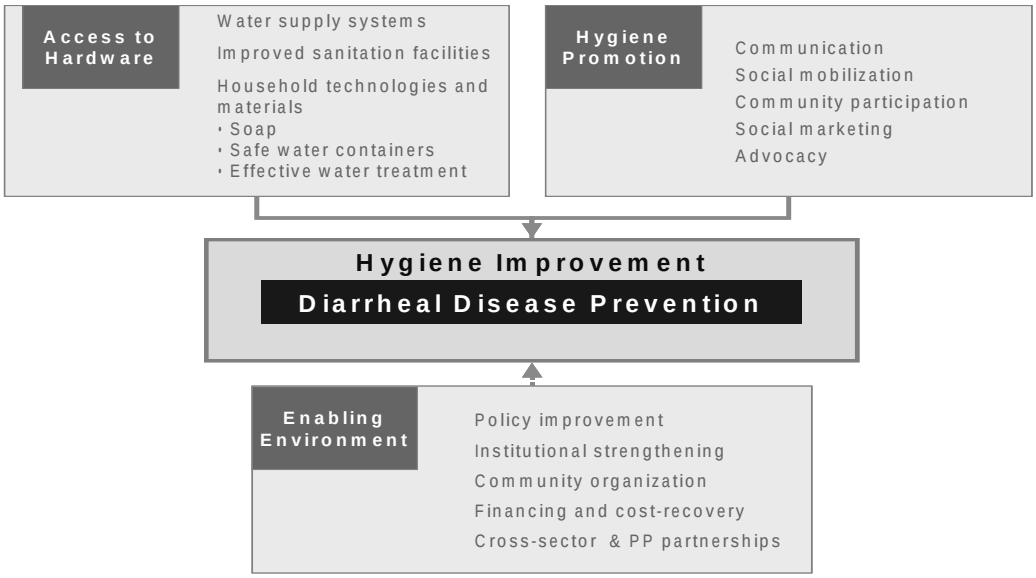
At least one location currently presents itself to ESP as a viable community in which to implement an Anchor Project: *Mekarjaya* in the upper watershed above Bandung where a local NGO – Citizen Care for the Environment (WPL) - has already engaged residents in land management, agro-forestry, and community-based infrastructure activities.

RISK AREAS – RISKED FOCUS. Diarrhea is the second largest killer of children under the age of five in Indonesia. Annually, 100,000 children lose their lives to this disease. But, ESP is regularly presented with requests for intervention in locations suffering from a variety of non-diarrheal health risks. These include risks from overuse of pesticides, pollution from industrial point sources, dengue fever, upper respiratory infections, skin diseases, and avian influenza. Under the Risk Areas – Risked Focus approach, ESP would examine each opportunity, prioritize Project resource allocations, and evaluate local risk against the Project's diarrhea focus. For each case, ESP must decide if its resources should be committed toward addressing non-diarrheal health risks or are better committed to a diarrhea focus alone.

1.3. INTEGRATION FOR HEALTH IMPACT

The preliminary findings of the BHS Baseline Survey indicate that 26% of children under the age of 3 had diarrhea in the two weeks preceding the survey. This is a consistent figure across provinces and rural and urban settings. This is a high percentage and typical of communities living in thick fecal contamination.
Any approach to preventing diarrhea must therefore address all pathways by which children encounter this fecal film.

There are three key elements to any successful program to fight disease: access to necessary hardware or technologies, promotion of healthy behaviors, and support for long-term sustainability. USAID's diarrhea prevention strategy, known as the Hygiene Improvement Framework (HIF), demands equitable resource commitment to each of these three components so that they work synergistically to reduce childhood diarrhea. The HIF is shown below:



ESP is working in each component, but the work has not yet been integrated in a single location to maximize synergies and diarrheal disease prevention. Without radically altering ESP's work, the Project can better integrate its activities and maximize its impacts by adopting the HIF to guide Project activities.

INTERNAL INTEGRATION FOR ESP. ESP should consider forming Hygiene Improvement Teams at the central and regional levels to operationalize the integrated approach of the HIF. The functions of these teams would be to continuously identify opportunities for programmatic synergies, ensure that opportunities turn into integrated field activities, and establish systems to measure the impact of these activities. The Teams would also be the locus for rationalizing Project approaches to participatory methods, gender, behavior change communication, and monitoring and evaluation.

However, installing a culture of integrated planning and action for diarrhea prevention in ESP will not occur without building the capacity of ESP staff in particular areas. Integrated thinking will require a change in most staff's technically focused mindset and guidance in identifying viable options for integration. The short-term objective of this capacity building would be to prepare ESP staff to think differently about their work in preparation for the development of the Project's next annual work plan.

INTEGRATING BHS PARTNERS INTO THE FRAMEWORK. Each of the Basic Health Services (BHS) partners – ESP, HSP, SWS, and Food and Nutrition – can contribute to and benefit from participating in the application of the HIF toward diarrhea prevention. ESP provides technical services and participatory approaches; HSP contributes health professionals, depth of reach in the Ministry of Health, and a matching focus on diarrhea prevention; SWS brings a preventive "hardware" product – *Air Rahmat* - and a market-based approach to its sustainable delivery, and the Food and Nutrition partners have multiple talents and a deep reach into communities where ESP will not be directly operating. Hygiene Improvement Teams could be a coordinating mechanisms to bring these projects together around diarrhea prevention.

1.4. PROPOSED ACTIONS FOR THE CURRENT ESP WORK PLAN

Several activities are underway or planned that will move ESP closer to maximizing its impact on diarrheal disease. The critical point for their operationalization will be July – September, 2006 when ESP will prepare its next annual work plan. The key activities that will affect ESP's more integrated approach to work plan development are placed in a timeline and described in detail in the report.

1.5. CONCLUSION

The next seven months provide ESP with the time to reflect on the enormous progress made to date and take advantage of the opportunities it has created for even greater achievement over the remaining years of the Project. USAID's BHS Program was created with synergistic impact in mind, and ESP, HSP, the Food and Nutrition partners, and SWS are poised to make the synergies real. Now is the time for them to plan together how their respective strengths can best be collectively mobilized to reduce the level of debilitating diarrheal diseases and the annual unnecessary death of 100,000 young children in Indonesia.

1. INTRODUCTION

From February 6-27, 2006, Dr. Christopher McGahey worked with a multi-sector team of Indonesian and international specialists to conduct a critical review of the USAID-funded Environmental Services Program (ESP) activities and make recommendations to strengthen their contributions to health outcomes, especially diarrhea among vulnerable women, children and poor families. The Scope of Work for the assignment is presented in Appendix 1.

The objective of the assignment was to identify concrete opportunities for maximizing the incorporation of health – and particularly prevention of diarrhea in children under the age of three years – in ESP activities. This consultancy was expected to identify opportunities and resources for including health messages, activities and links in all aspects of ESP's work. The outputs of the assignment include recommendations related to ESP operations and activities, staff and partner capacity building, and integration with technical resources from but not limited to USAID/Basic Health Services (BHS) partners.

To accomplish the objectives of the consultancy, Dr. McGahey reviewed documents and dedicated considerable time with a range of internal staff and external partners in individual and group interviews and collective discussions. Field visits were made to current and potential ESP sites in East Java Province (*Surabaya*, *Malang*, *Temas*), North Sumatra Province (*Medan*, *Semangat*), and West Java Province (*Mekarjaya*, *Bandung*). Documents reviewed, a list of those met, and the consultancy schedule are presented in Appendix 2.

2. ACKNOWLEDGEMENTS

An enormous amount of logistical, linguistic, and technical talent supported Dr. McGahey in this consultancy. He is deeply grateful for their collective honesty and creative thinking. None of what is presented in this document would have been possible or grounded in a mosaic of personalities and hard work that have brought ESP to life in one short year without their support. Every attempt has been made to ground recommendations and conclusions in the capacity of ESP staff and the dreams of those who benefit from the Project's multitude of activities. USAID/Indonesia has been forward looking in assembling its Basic Health Services Program, and hopefully this assessment will contribute to its partners' ability to collaborate actions, integrate thinking, and reduce debilitating disease and death among young children. The author regrets not being able to spend time during the consultancy with Theresa Tuaño, but he wishes her good health and a child born into a cleaner and healthier Indonesia.

3. ANALYSIS OF THE CURRENT SITUATION

As part of all conversations and observations made during this consultancy, the author focused on gaining a consistent understanding of the current status of ESP's health-related achievements, the strengths of the Project which contribute to making them possible, the weaknesses of the Project which prevent their maximized impact, the opportunities which the Project has to expand their impact, and the threats which are the primary obstacles that must be considered when working to maximize impact. The key findings of this informal analysis that are directly related to the Project's ability to prevent diarrheal disease are presented in Table 1.

Table 1 Compiled key findings of analysis of the current status of health in ESP.

Consideration	Description
Strengths which support maximizing health impacts	1. Foundation of focused, successful hygiene activities 2. Communication materials on hygiene developed with stakeholder input, pretested, and printed 3. Relationships, networks, and activities established based on participation, empowerment, and trust
Weaknesses which limit health impact	1. Limited staff capacity to achieve and quantify diarrheal disease prevention 2. Varying individual approaches to community participation among field staff 3. ESP contractual outcomes encourage "siloing" of talented and active technical specialists
Opportunities which would support maximizing health impact	1. Raise profile of program integration and health outcomes through reporting and communication 2. Raise prominence of day-to-day focus on health through structured and coherent organization 3. Build, unify, expand handwashing with soap in ESP and with other projects (HSP, Food and Nutrition)
Threats which are potential barriers to maximizing health impact	1. Food and Nutrition partners and ESP frequently have differing goals and objectives 2. HSP has limited commitment outside of health care facilities 3. ESP balancing achieving localized success and achieving impact at scale

ESP staff should take great pride in the fact that there are numerous strengths and opportunities which support maximizing the health impact of the Project. As the Project looks forward, the objective will be to mobilize these strengths to take advantage of the opportunities and overcome the weaknesses while considering the context of the potential barriers. The action plan presented in this document is intended to accomplish this.

3.1. ESP STRENGTHS

ESP is not lacking in strengths that will play key roles in ensuring the maximum health impact from its activities. At the top, senior management and partners at USAID/Indonesia are entirely committed to ensuring the Project integrates its efforts to achieve environmental, institutional, and health impacts. They have each concretized their commitments respectively in the USAID BHS Strategic Objective and in the vision statement that guides ESP.

- BHS SO Indicator
  Proportion of children aged 0 – 35 months who had diarrhea at any time in the two week period prior to the survey

- ESP's vision
  ESP promotes better health through improved water resources management and increased access to clean water and sanitation services

But, the core strength of the Project is the high degree of talent and history of achievement within the ESP staff. There is a high degree of competence and seemingly unbounded energy applied to the Project. Specifically, in the groups that should be expected to contribute most directly to positive health impacts – the Health Communication Coordinator, the Health and Hygiene regional staff, the Service Delivery Technical Advisor and the regional sanitation and WATSAN specialists, the Monitoring and Evaluation Specialists, and the Public Outreach and Communication staff at both levels – there is a great deal of talent that has achieved much in the first Project year under their respective components.

Specifically among the health and hygiene staff, there have been several notable achievements related to community mobilization and ownership of localized efforts to expand handwashing with soap – a behavior demonstrated to lead to a 50% reduction in diarrhea among children under the age of three. Structured campaigns combined with the facilitation of mutually beneficial community partnerships have resulted in a field-tested set of communication materials and a large number of discrete, focused, and successful hygiene activities. These provide the Project with a solid evidence base on which to create and support similar programs as new communities request participation, to incorporate these proven approaches with other component-specific Project activities – such as communal sanitation systems, to expand PDAM's operations among the urban poor, to protect water sources from excreta contamination, to improve land use practices, and to serve as a programmatic bridge to help HSP achieve its diarrheal disease prevention objectives.

In accomplishing these achievements, ESP staff have created an intricate and extensive set of working relationships and networks that will facilitate future activities. ESP has generally followed a highly participatory approach to establish these relationships and networks, and this has resulted in a significant amount of genuine empowerment and trust in communities. This is particularly true of the work by watershed management and health staff.

3.2. ESP WEAKNESSES

ESP has built-in weaknesses that stand in the way of its movement toward achieving health objectives in the near term. The contractual requirements of the Project and their emphasis on infrastructure construction encourage work in "silos" in which highly talented and active sectoral specialists are driven to achieve commendable but relatively narrowly defined objectives directly related to their technical specialty. Project components, their Performance Monitoring indicators, and their weaknesses in maximizing health impacts are shown in Table 2.

Table 2 Tabulation of Project Components and their Performance Monitoring Indicators.

Component	Indicators	Weakness re: Health
Public Outreach and Communication	Number of campaigns supported Number of campaigns supported by ESP partners/stakeholders Number of communities exposed to campaigns	Campaigns are not asked to link to health activities Emphasis on numbers drive activities away from long-term campaigns and behavior change
Watershed Management and Biodiversity Conservation	Number of new policies recognizing land tenure and access rights of community forest management Increase in rehabilitated land Increased forest area with high biodiversity value under improved local management Number of community-based coastal rehabilitation activities implemented to improve the functioning of the watershed area impacted by the tsunami	Indicators are entirely "siloed" toward "green" environmental outcomes only marginally related to health improvement
Service Delivery	Number of PDAMs providing better services Percent of household/population that use an improved water source Number of sewage treatment proposals developed to be funded by international development banks Number of community-based solid waste systems developed and implemented Number of small-scale sanitaiton plans developed and implemented Proportion of households that adopt adequate health and hygiene practices	All but one indicator drive infrastructure support and construction Construction has been occurring with minimal community engagement needed to ensure sustainable and hygienic use of infrastructure improvements

Environmental Services Finance	Number of PDAMs operating at full cost recovery Number of regulatory boards established to regulate the development of tariff increases Number of projects related to environmental service sectors that execute a guarantee agreement with DCA Number of PDAMs receiving international credit rating certificate Number of PDAMs, local government, or provinces successfully receiving additional revenue from obligation bonds Amount of funding generated from public or private sector to expand the ESP impact in Aceh	Indicators are devoid of any reference to health impacts of improved operation of municipal water providers
Cross-cutting Theme/ Integration	Level of funding leveraged to support ESP activities Number of integrated programs between ESP and other USAID programs Number of people participating in ESP training and workshops	No motivation is given for ESP staff to coordinate with other ESP staff to achieve outcomes – either in their respective "silo" or outside of it

Through this organizational structure, the Project has institutionally marginalized the three activities which have been shown to be most effective in reducing diarrheal disease in children under the age of three: (1) safe disposal of children's feces, (2) safe collection and storage of drinking water, and (3) handwashing with soap using proper technique at critical times. The intellectual basis lives within the Project regarding how each "siloed" activity might contribute to improved health, but there is a general lack of understanding on the part of all Project staff regarding how these three specific sets of hygiene improvement activities could be incorporated into "siloed" efforts to facilitate achievement of component objectives AND diarrheal disease reduction.

Because ESP staff have focused on discrete activities related primarily to ther technical specialty, they have not been exposed to state-of-the art processes that have been shown to prevent diarrheal disease in children under the age of three. Health and Hygiene staff have only recently gained familiarity with the Hygiene Improvement Framework which USAID, UNICEF, and others use to guide their diarrheal disease prevention programs, and ESP has not fully committed to organizing activities in support of the three key behaviors which most directly affect diarrhea in this target audience.

Finally, the current ESP staff apply varying approaches to community participation when working with their field partners. These approaches range from minimal participation focused on operation of infrastructure to extensive participation led by watershed management specialists. The former approach has led to many unsustainable infrastructure construction projects. The latter has repeatedly shown greater success in achieving long-term sustainability of interventions and change.

3.3. ESP OPPORTUNITIES

Talent, vision, energy, and a record of achievement across the Project have generated the numerous successes of ESP during its first year and set the stage for the Project to achieve even greater results in future years. Strength in reporting and communication provide untapped opportunities to raise the profile of health achievements in the Project. Identification of viable infrastructure alternatives provides several opportunites to improve the synergies between hardware and "software" through proven integrated approaches. Handwashing promotional campaigns, particularly those done locally in targeted communities, have created a skill base, materials, and expanding local interest that can be channeled to adapt these campaigns as parts of the activities of other components and USAID projects. With its high capacity to conduct these campaigns, ESP should look to every opportunity to incorporate handwashing promotion into on-going activities.

3.4. ESP THREATS

A limited number of significant threats surround this universe of opportunities and may limit ESP's ability to take advantage of them. First, as mentioned above, there is a general mindset among Project staff which supports "siloed" activities within a technical specialty inconsistent with matrix management. If this mindset is not expanded to contribute to the technical specialty AND health outcomes, the impact of the Project will be threatened.

External to the Project, two potential threats have been observed and appear to have slight negative impacts on the ability of ESP to work in an integrated fashion with two of its three BHS partners. ESP has met challenges in working optimally with the USAID/Indonesia Food and Nutrition partners as they have multiple stakeholders outside of USAID and ESP, and they have goals and objectives for those other donors and for their own organizations that my not be consistent with ESP's outcomes. This dynamic is by no means unique to the local situation, and it should be expected to remain as an obstacle to fully maximizing ESP's ability to achieve its objectives. In addition, the extent to which HSP will operate outside of health care facilities and the health care delivery system is unclear at this time. If HSP focuses largely on facilities and service delivery, then its integration with ESP's more community-based approach to health improvement will be less than optimal.

Finally, it is expected that ESP will experience a continual struggle between achieving local, small-scale successes and achieving impact at scale. During the first year of the Project, its successes have been mostly the former with the intent of expanding them toward scale through leveraging, facilitating similar activities by others, and affecting policy. The transition from the former to the latter is highly challenging and may threaten the Project's contribution to significant reduction in diarrheal disease among Indonesian children.

4. OPTIONS FOR INTEGRATION

Through document review, field visits, and this review of strengths, weaknesses, opportunties, and threats numerous opportunities were identified in which a more direct impact on health could be achieved through ESP's current portfolio of activities. The opportunities are too numerous to list and discuss individually, so groupings of activities were developed that illustrate the variety of ways in which a more integrated approach of available talent and activities would directly prevent diarrhea in children under the age of three.

4.1. ESP'S ROLE IN USAID'S BASIC HUMAN SERVICES PROGRAM

According to ESP's Performance Monitoring Plan, ESP was

> "… launched to support USAID's Water for the Poor Initiative [and] designed to expand access to clean water and improve watershed management in key areas of the country where the lack of appropriate watershed management is having measurable negative impacts on water supply, water quality, and human health. ESP's efforts to improve access to water, improve water quality, and improve sanitation are critical to one of USAID's goals of improving child survival in Indonesia by reducing the prevalence of childhood diarrhea in children under the age of [three]. In Indonesia, diarrhea remains the second largest killer of children under the age of five, accounting for over 100,000 deaths per year."

Therefore, ESP's delivery of only its outcomes – as shown in Table 2 - is a necessary but not sufficient contribution to the overall goal of diarrhea prevention among young children. Instead, activities should – whenever possible – achieve both the specific outcome descibed in ESP's Performance Monitoring Plan and contribute directly to "reducing the prevalence of childhood diarrhea in children under the age of three". Several specific ways are presented in Appendix 3 for the Project to consider to accomplish this specific objective. The following sections group these specific actions into five approaches intended to guide activity analysis and design through the life of the Project:

- The Blue Thread
- Clean, Green, and Hygiene
- Hardware Follows Software
- Anchor Projects
- Risk Areas – Risked Focus

Each is presented and discussed separately in the following sections.

4.2. THE BLUE THREAD

The title for this approach emerged during facilitated discussions with the ESP regional staff in North Sumatra. This team has an established record of working in an integrated fashion across specialties, and their ideas and actions are reflected in this approach.

In the Blue Thread approach, which is being partially applied in several ESP project sites, water – and specifically drinking water – serves as an entry point to community engagement. In several ESP sites, participatory and land management techniques are being applied to reclaim damaged land, facilitate biodiversity conservation, and improve – or sometimes reclaim – drinking water sources.

Land Management → Source Protection → Drinking Water Production

Stopping at the point of improving access to an improved water source should be expected to contribute somewhat to diarrhea prevention, but, its prevention will be optimized through this improvement by paying similar attention to the hygiene behaviors of the users of the improved water source. Hygienic behaviors at the household level will ensure that the improve drinking water stays safe from the source until a person drinks it. Improving users' behaviors, particularly

- Safe collection and storage of drinking water;
- Safe disposal of the feces of children under the age of five; and
- Handwashing using appropriate technique at critical time

Will maximize the contribution of an improved water source to diarrheal disease prevention.

So, under The Blue Thread approach, the current activities would be supported by behavior change communication to complete the stream of cause and effect as shown here:

Figure 1 The Blue Thread approach - Integrating environmental conservation, access to drinking water, and diarrheal disease prevention.

ESP's work program enables application of The Blue Thread approach in urban, peri-urban, and rural locations. In urban and peri-urban locations, the approach would link the contribution of PDAM capacity-building to reducing diarrhea among the urban poor. In applying the approach, land management techniques would be applied specifically to protect the municipal water supply source used by the local PDAM concurrent with PDAM capacity-building activities. As PDAM capacity was increased and their source water protected from contamination, ESP efforts would also engage targeted unserviced urban poor populations to advocate for access to PDAM water, expand their access to affordable point-of-use drinking water treatment technologies, and improve their hygiene behaviors directly related to diarrhea prevention. Current Project successes working with communities, schools,

posyandus, and *puskesmas* on health and hygiene activities would be built on to achieve and quantify successful behavior change. This continuum of integrated activities is illustrated below.

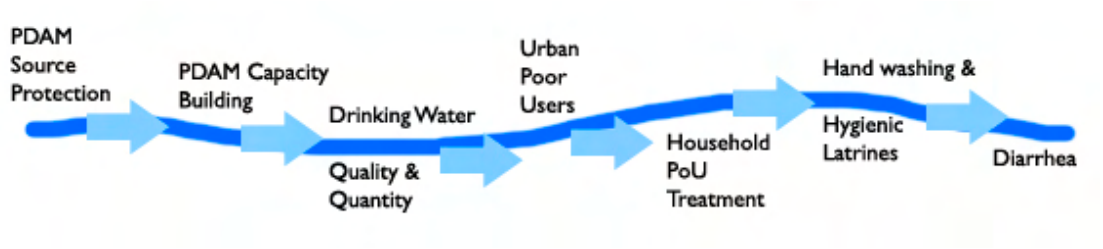


Figure 2 The urban and peri-urban Blue Thread.

This approach is highly applicable in multiple urban locations where ESP is working to build PDAM capacity, their community relations are being strengthened, and urban poor communities have been mobilized through community-based activities.

The approach is similarly applicable in upland, rural areas where ESP is working. In these locations, land rehabilitation targeted at water source – and particularly groundwater spring – protection would be integrated with hygiene behavior change among users as shown in the following schematic:

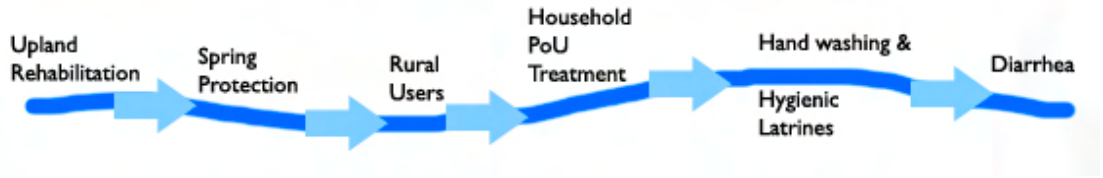


Figure 3 The rural Blue Thread.

The approach is applicable in all ESP locations where village-level agro-foresty, biodiversity conservation, and land reclamation activities are expected to improve local drinking water supply. In these areas, schools and *posyandus* present communication focuses for the development of supportive behavior change activities. The approach could be applied immediately in *Semangat Gunung* where ESP is working to develop an agro-forestry field school in the upland areas of North Sumatra province.

Another immediate opportunity for the Project is being taken advantage of by ESP staff in establishing the Rural Blue Thread approach as an integral part of the curriculum for this field school. Consultants and staff leading curriculum preparation have set aside a section of the design to address linkages between agro-foresty and diarrhea prevention. Minimal interventions related to handwashing promotion in connection with clean-up after field work will serve as an entry point for comprehensive incorporation of the Rural Blue Thread approach into field school practice.

4.3. CLEAN, GREEN, AND HYGIENE

In this approach, community-based solid waste management serves as an entry point. ESP is partially applying this approach in several Project sites. In these activities, community-based solid waste management has led ESP into several communities, or it has emerged as a community priority as a result of local mobilization generated by handwashing campaigns. In either case, the approach takes advantage of the synergies created by solid waste management and handwashing to directly prevent diarrheal diseases.

Improved solid waste management should not be expected in an of itself to contribute significantly to diarrhea prevention. These activities only disrupt a few, if any, of the many avenues by which children in communities encounter feces. The full range of avenues are illustrated in the F-diagram (see Appendix 4).

But, diarrhea prevention can be maximized by paying attention to both solid waste management and the hygienic behaviors of the community that are more closely related to diarrhea prevention, particularly:

- Safe collection and storage of drinking water;
- Safe disposal of the feces of children under the age of five; and
- Handwashing using appropriate technique at critical time.

So, under The Clean, Green, and Hygiene approach, current solid waste management activities should be supported by behavior change communication to complete the stream of cause and effect as shown here:

Figure 4 The Clean, Green, and Hygiene Approach - Integrating solid waste management and diarrheal disease prevention.

ESP's field successes enable application of The Clean, Green, and Hygiene approach to several on-going urban activities. During this consultancy, community visits were made to three locations

- *Sunggal* in peri-urban Medan,
- *Tamansari* in urban Bandung, and
- *Wonokromo* in urban Surabaya

where solid waste management has been initiated and handwashing campaigns have been conducted but where behavior change communication has not focused on all three key behaviors presented above.

The approach is applicable in all ESP locations where solid waste management has been identified as a community priority. The approach may be particularly applicable as a contribution to protecting PDAM water sources as suggested earlier in Urban Blue Thread activities.

4.4. "HARDWARE FOLLOWS SOFTWARE"

The title for this approach was adapted from an accepted rule in the water supply and sanitation sectors. "Hardware follows software" means that community infrastructure ("hardware") construction is never initiated until the benefitting community is prepared to own, operate, hygienically use, and make decisions ("software") regarding the improved infrastructure. In ESP's case, the software also includes preparing community members for their participation in hygiene behavior change activities that will directly contribute to prevention of diarrhea.

As ESP is applying this approach, community-based sanitation systems serve as the most common entry point to community work. As these activities are currently being implemented, however, the infrastructure and its operation are the end points of ESP's input. Empowering community mobilization is not conducted, and the three key behaviors most important to diarrhea prevention in children under the age of three:

- Safe collection and storage of drinking water;
- Safe disposal of the feces of children under the age of five; and
- Handwashing using appropriate technique at critical time

are not being synergistically promoted. This stops the process short of maximizing its impact on diarrhea in young children. To achieve maximum impact, it is important that ESP follow the thread all the way to completion as shown below:

Figure 5 The "Hardware Follows Software" approach - Integrating community-based infrastructure with diarrheal disease prevention.

ESP will be supporting the construction of several community-based sanitation systems. It is critical that the same high quality participatory processes that are being applied by ESP's agro-forestry and health staff become applid in support of infrastructure construction. Failure of beneficiaries to be empowered to own and make decisions regarding the infrastructure and failure to ensure the hygienic use of the infrastructure could threaten rather than improve the health of the urban poor.

The "Hardware Follows Software" approach should be applied to all community-based infrastructure improvements supported by ESP, but particularly to the construction of sanitation systems in cooperation with BORDA. Application of this approach should also be considered during the design of and preparation for the sanitation mapping and action planning activity that is currently being developed by the Project. As this activity is only in preliminary stages of work plan preparation, an immediate opportunity exists to integrate the talents of the Health Communication Coordinator, the Service Delivery Technical Advisor, GIS specialists, and the Watershed Management Advisor to collectively implement a comprehensive sub-watershed approach to sanitation mapping.

4.5. ANCHOR PROJECTS

In Anchor Projects, the full technical, mobilization, and hygiene improvement talents available to ESP, HSP, and SWS would be directed at a single community to enable its comprehensive transformation and development. In this approach, which is expected to be viable in selected ESP project sites, the findings of Participatory Rural Appraisals (PRAs) serve as the flexible entry point to community engagement. During PRAs, community aspirations and assets are identified. Based on an understanding of these, ESP is positioned to mobilize support that is consistent with the community's capacity to take advantage of it.

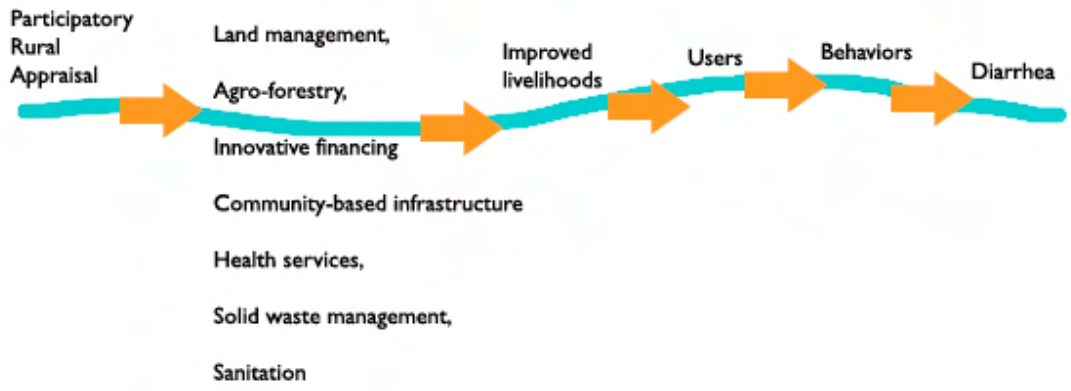


Figure 6 The Anchor Project approach - Integrating ESP's technical capacities to improve livelihoods and prevent diarrheal disease.

Applying the Anchor Project approach will require ESP to balance the capacity of the projects to mobilize resources with the capacity of the community to accept them and develop. At least one opportunity currently presents itself to ESP as a viable community in which to implement an Anchor Project: *Mekarjaya* in the upper watershed above Bandung city. In this community, a local NGO – Citizen Care for the Environment (*WPL*) - has been working with the residents for 18 months in planning and priority action. Through this "Bank *Pohon* Program", the community has become engaged in land management, agro-forestry, and community-based infrastructure (water supply protection and distribution) activities. These initial successes would be the base upon which to introduce hygiene behavior change and other BHS support in a comprehensive and integrated program.

4.6. RISK AREAS – RISKED FOCUS

Diarrhea is the second largest killer of children under the age of five in Indonesia. Annually, 100,000 children lose their lives to this debilitating and miserable disease. But, many other environmental threats exist to their health, and ESP must judge for itself whether its programmatic focus on diarrhea prevention would be augmented or weakened by expanding its focus to include other health risks. Under this approach, the consideration of these risks serves as ESP's entry point to possible community engagement.

ESP has already seen opportunities and received requests for intervention in locations suffering from a variety of health risks including overuse of pesticides, pollution from industrial point sources, dengue fever, upper respiratory infections, skin diseases, and avian influenza. When examining these opportunities, ESP must prioritize its resource allocations and assess local risk against the Project's diarrhea reduction focus. In each case, ESP must decide if its resources should be committed toward addressing these health risks or are better committed to a diarrhea focus alone. Comprehensive diarrhea prevention in Indonesia is a complex and multi-faceted task, and ESP should approach other health risks with careful consideration of the advantages and disadvantages to the Project's and USAID's focus on diarrhea prevention in young children.

An obvious location where this approach should be used to guide decision-making is in *Temas*, a small town outside of Malang in East Java. In this town, roughly 40 households are engaged in chicken slaughter and processing. These families kill and prepare for market approximately 3000 chickens each night, seven nights a week. The process and the uncontrolled disposal of all waste products into a single stream that also serves as a source for bathing, excreting, and laundry present several potential health and environmental risks. But, ESP must establish, at a minimum, if there is a high risk of diarrhea among children under the age of 3 years generated by the chicken slaughter and waste disposal activities. The Project must also establish – for comparative purposes what the prevalence is of other diseases among the population. In this risk balancing approach, health risk and health data are the factual bases upon which ESP would consider action.

Figure 7 The Risk Area – Risked Focus approach to opportunity selection.

It can be clearly seen from these five approaches, that diarrhea prevention will be maximized when multiple specialties are mobilized in integrated activities focused on both health and other outcomes. At the present time, ESP is not organized or functioning to the integrated extent necessary for maximized impact. The following section presents a model for improving integration within and outside the Project to prevent diarrheal diseases.

5. INTEGRATION FOR HEALTH IMPACT

The preliminary findings of the BHS Baseline Survey indicate that 26% of children under the age of 3 had experienced diarrhea in the two weeks preceding the survey. This was a consistent figure across provinces and rural and urban locations. This is a high percentage and typical of communities living in widespread fecal contamination. It is generally accepted that in these settings, 90% of diarrhea cases can be attributed to three major causes: inadequate sanitation, inadequate hygiene, and unsafe water.

Globally, the health care system has dealt extensively with the symptoms of diarrhea, but it has done little to reduce the overall prevalence of the disease. Despite a decline in deaths due to diarrhea, neither morbidity nor the health burden due to diarrhea has decreased because health experts are treating the symptoms but not addressing the causes. Thus, diarrhea's burden on the health system, its effects on household financies and education, and its added burden on mothers have not been mitigated.

Programs in numerous countries have demonstrated that interventions can and do reduce diarrhea morbidity.

- A 30 – 50% reduction in the burden of diarrheal diseases is achieveble through improvements of water supply, sanitation, and hygiene
- Analysis of 21 controlled field trials related to point-of-use (POU) drinking water treatment and safe water storage at the household level showed a reduction of 42% in diarrheal disease
- A literature analysis has found that the single hygiene practice of handwashing with soap is able to reduce diarrhea incidence by over 40% and intestinal infections by over 50%

ESP has the strengths and opportunities to achieve this level of impact in the areas where it works. But, the Project's lack of an integrating framework and organization remain a central weakness in achieving these impacts.

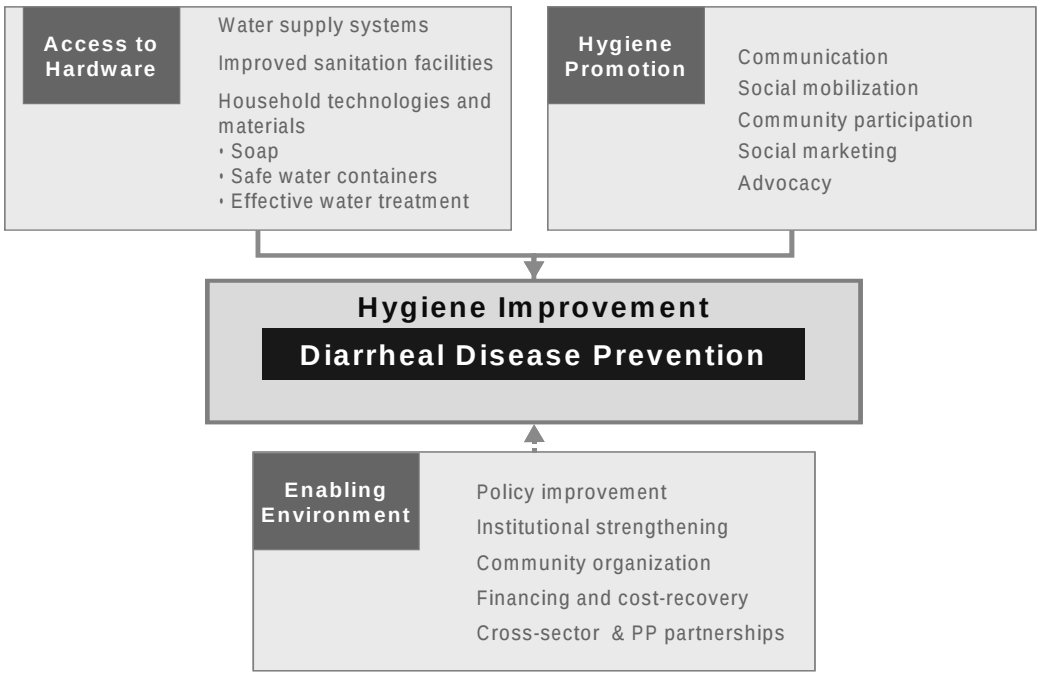
5.1. FRAMING FOR FOCUS

A comprehensive approach to preventing diarrhea must address the three key elements of any successful program to fight disease: access to the necessary hardware or technologies, promotion of healthy behaviors, and support for long-term sustainability. USAID's diarrhea prevention strategy, known as the Hygiene Improvement Framework (HIF) has these three core components:

- Improving access to water and sanitation "hardware"
- Promoting hygiene
- Strengthening the enabling environment

These components work synergistically to make possible changes in the three key behaviors that reduce the incidence of childhood diarrhea: safe disposal of feces, washing hands

correctly at the right times, and storing and using clean water for drinking and cooking. The Hygiene Improvement Framework is shown in the following figure:



ESP is working hard in each of the three components – hardware is being constructed, mobilization and communication are extensive, and financing and cost recovery approaches are being developed. But, the components have yet to be brought together in an integrated set of coordinated activities to maximize diarrheal disease prevention. Without radically altering ESP's work, the Project can better integrate its activities and maximize its impacts.

Another advantage of applying the Hygiene Improvement Framework to diarrheal disease prevention programming is the availability of a peer-reviewed Guide to Assessing Hygiene Improvement that provides defined indicators and survey questions for baseline and impact evaluation. The Guide was applied in the development of the BHS baseline survey, and the findings relevant to the key indicators related to ESP Hygiene Improvement programming are shown in Table 3.

Table 3 Diarrheal Disease Prevention Indicators – Preliminary BHS Baseline Survey Findings

Indicator	Value	Indicator	Value
Proportion of children aged 0 – 35 months who had diarrhea at any time in the two-week period prior to the survey	26.7%	Handwashing at critical times	
		Post – defecation	8.0%
		Post bottom-cleaning	6.8%
		Pre child-feeding	4.3%
		Pre food-preparing	2.8%
		Pre eating	7.4%
Effective water treatment		Safe disposal of child feces	27.7%
Observed use of *Air Rahmat*	0.1%	Safe solid waste disposal	23.3%
Chlorine test positive	1.6%		

5.2. ORGANIZING IN THE FRAMEWORK

The two main elements required for ESP to realise the synergistic benefits of work within the HIF are already present in the Project: (1) talented staff working in each of its three components and (2) a Project commitment to integrated work through matrix management structures. What remains is to bring these elements together in a functioning relationship that facilitates a focus on diarrheal disease prevention through planning, action, and impact measurement.

ESP should consider the formation of Hygiene Improvement Teams at the central and regional levels to bring together this talent and the commitment. The functions of these teams would be to continuously identify opportunities for programmatic synergies, to ensure that opportunities turn into integrated field activities, and to establish systems to measure the impact of these activities. The gender assessment conducted by ESP in 2005 also identified the need for such structured teams, and it proposed that Gender Teams or Social Teams be formed. It is recommended that Hygiene Improvement Teams encompass both gender and social mobilization as part of their mandate in addition to health programming. Gender issues and social mobilization are critical to expanding access to hardware and ensuring that well-planned hygiene promotion accounts for gender equity and applies consistent mobilization tools and approaches.

At the central level, the Hygiene Improvement Team would be led by the Hygiene Communication Coordinator. Its membership would consist of, at a minimum, the three Technical Advisors for Watershed Management, Service Delivery, and Service Delivery Finance and the heads of the GIS and the Public Outreach and Communication Units. Its operation would be determined based upon Project need. Its objectives would be to coordinate Project activities, share knowledge and information, and ensure the high profile of health activities and impacts in communication products and outreach events.

At each regional level, the Hygiene Improvement Team would consist of Community-based Sanitation, Water Supply, Health and Hygiene, Watershed, Agricultural, Agro-forestry, GIS, and Municipal Operations specialists as determined by each regional team. Its leadership would be determined by staff capacity and the needs of each regional program. Its leader would coordinate with the Health Communication Coordinator to ensure consistency of planning, action, and evaluation.

Each team would meet on a schedule that serves the needs of its office and the Project as a whole.

5.3. BUILDING CAPACITY TO INSTITUTIONALIZE THE FRAMEWORK

Installing a culture of continual searching for opportunities to raise the prominence of health and of integrated planning and action will not occur without building the capacity of ESP staff to address identified weaknesses. Their natural tendencies are toward "siloed" sectoral activities focused direclty on contractual outcomes and individual technical specialties. Integrated thinking will require a change in many of the staff's mindset and guidance in identifying viable options for integration.

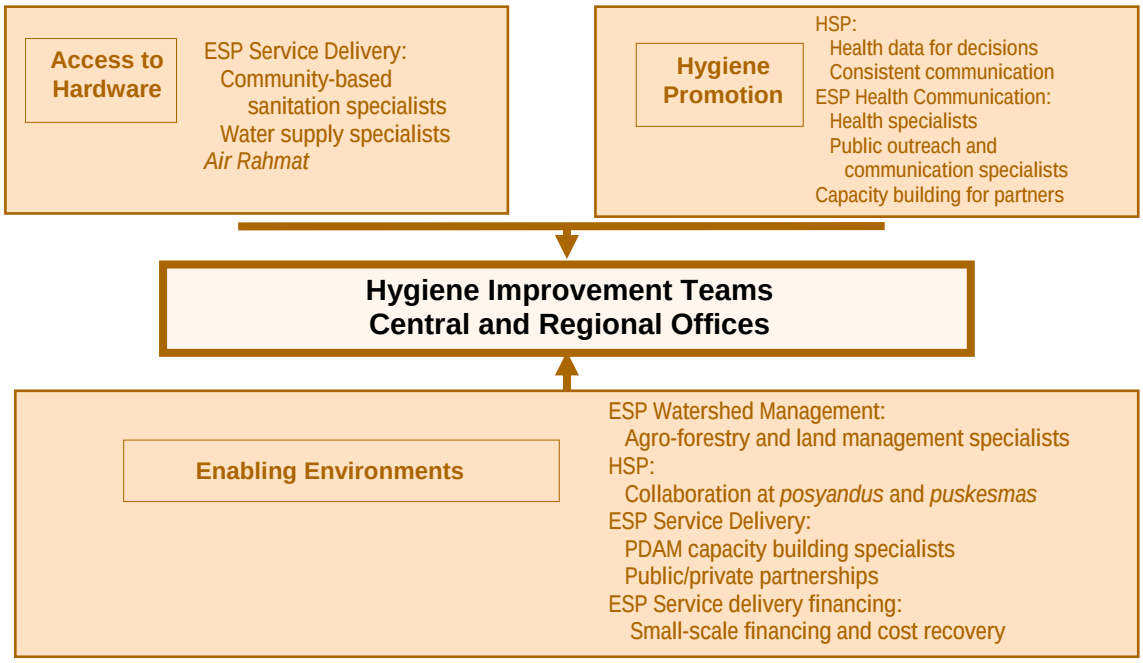
The short-term objective of capacity building would be to prepare ESP staff to think differently about their work in preparation for the preparation of the Project's next annual work plan. The work plan is due for submission at the end of September 2006, and its development is expected to begin in July.

During the current consultancy, preliminary efforts were made in support of changing the mindset from "silo" to integrated thinking, but very little change should be expected to result from this initial exploration of approaches and considerations. The mindset should only be expected to change through more concentrated training strategically linked to each person's day-to-day activities.

If ESP senior management agree that the Hygiene Improvement Framework would serve as a beneficial organizing guide for health and hygiene acivities in the Project, then the capacity building should begin with an orientation to the Framework, each of its components, and approaches and tools which can be applied to implementation. This training would include capacity building in diarrheal diseases and their prevention, activities that are known to prevent diarrheal diseases, participatory techniques used to prevent diarrheal diseases in communities, and tools for quantifying the impact of these techniques and activities. The outputs of the training would be the formation of regional Hygiene Improvement Teams, plans for immediate action related directly to improving the contribution of each attendees current portfolio of activities to health outcomes, and plans for how each office prefers to contribute to creating a more integrated next annual work plan for ESP. Finalization of the specific content, duration, and developers of this training would be led by the central-level Hygiene Improvement Team with significant input from regional staff.

5.4. INTEGRATING BASIC HEALTH SERVICES PARTNERS INTO THE FRAMEWORK

Each of the Basic Health Services partners – ESP, HSP, SWS, and Food and Nutrition – can contribute to and benefit from participation in the application of the Hygiene Improvement Framework to guide ESP's efforts in diarrhea prevention. ESP provides technical services and participatory approaches; HSP contributes health professionals, depth of reach in the Ministry of Health, and a matching focus on diarrhea prevention; SWS brings a preventive product – *Air Rahmat* - and a market-based approach to its sustainable delivery, and the Food and Nutrition partners have multiple talents and a deep reach into communities where ESP will not be directly operating. The potential roles of each partner in the Hygiene Improvement Framework are illustrated in the following diagram:



The Hygiene Improvement Teams could be a coordinating mechanisms to bring these projects together around their shared focus on large scale diarrhea prevention.

6. PROPOSED ACTIONS FOR THE CURRENT ESP WORK PLAN

Several activities are underway or planned that will move ESP closer to maximizing its impact on diarrheal disease. The findings and proposals of this consultancy can be implemented with targeted inputs to these activities. The critical point for their operationalization will be ESP's preparation of its next annual work plan. The key activities that will occur between now and work plan submission and are expected to affect ESP's more integrated approach to work plan development are shown in Table 4 on the following page.

Table 4 Action plan – Toward Maximizing Health Impacts of ESP
Integrating health, gender, and communication

	Feb 06	Mar 06	Apr 06	May 06	Jun 06	Jul 06	Aug 06	Sep 06
Maximizing Health Impacts of ESP								
Review consultancy recommendations/finalize planning	x	x						
Formative research for communication strategy		x	x					
Integrated training (gender, communications, participatory approach, Hygiene Improvement)				x				
1st Training of Trainers for Agro-foresty Field School				x	x	x	x	
US Training for ESP Health Communication Coordinator					x			
Home leave for ESP Watershed Management Technical Advisor						x		
ESP Community-based WATSAN staff semi-annual meeting							x	
Hygiene Improvement and Communication on-the-job capacity building							x	
ESP Second Annual Work Plan development						x	x	x
From ESP Gender Needs Assessment								
To be completed before February 2006								
Gender Team formed								
Gender 201 planned								
Surveys and methods reviewed								
Gender mainstreaming for Community Livelihood Assessment Training of Trainers								
Gender 201 – (NDiamond TDY)				x				
Due diligence for local Gender 101 consultants	x							
Central Java Planning	x							
Gender 101 Planning	x							
First Gender 101 and Training Of Trainers	x							
Other Gender 101s		x	x	x				
Apply gender strategies	x	x	x	x	x	x	x	x
Diamond's TDY #3							x	

To begin implementing this action plan, the recommendations presented in this report and in the Gender Needs Assessment should be reviewed and considered by ESP staff. They should be adopted and planned for as they are supportive of the Project's objectives and capacity. Coincident with their consideration, formative research will be conducted to establish a depth of understanding of target populations necessary to develop a communication strategy for ESP. One aspect of this strategy will be a Hygiene Behavior Change Communication Strategy (HBCCS) that will guide behavior change programming in each opportunity pursued by ESP. The key findings of the research, and the core elements of the HBCCS will be integrated with the upcoming "Gender 201" training to provide information and knowledge to ESP's leadership regarding the Project's approach to diarrheal disease prevention. This capacity building exercise should be oriented toward the application of concepts and approaches to the day-to-day work of attendees.

During subsequent months, one or more of the key people who are expected to provide leadership to expanding integration and strengthening diarrhea prevention will be meeting other obligations. The Participatory Monitoring and Evaluation Specialist, Alifah Lestari, will be deeply involved in the 1st Training of Trainers for ESP's Agro-forestry Field School for several months. The Health Communication Coordinator, Nona Pooroe Utomo, will be out of the country receiving training in strategic communication for the month of June. The Watershed Management Technical Advisor, Reed Merrill, will be out the country on home leave for the month of July when planning will be initiated for the preparation of the Project's next annual work plan.

Finally, in August several opportunities will be available including collective meetings and detailed work planning during which intensive capacity-building in all aspects of integrated planning and Hygiene Improvement will be provided to ESP staff. The Project's next annual work plan will be delivered in September.

7. CONCLUSION

Every attempt was made during this consultancy to ensure that the recommendations made are consistent with the direction and capacity of ESP's staff and partners. Each is possible because a strong foundation of talent and achievement exists upon which each proposal was built.

But, some fundamental shifts in ESP's current approach to its work will be necessary in the coming months for integration and and increased focus on diarrheal disease prevention to be realized. First and foremost, the "siloing" of technical specialists – the result of the contractual obligations of the Project and the highly active performance of ESP staff during its first year – must be broadened. For this broadening to occur, the incentives which the obligations create must be expanded to facilitate greater integration of thought, planning, and action.

Headlining of integration and diarrhea prevention in Project products and publications can start to create incentives for emphasizing these cross-cutting themes throughout the Project. The responsibilities of staff to the success of Hygiene Improvement Teams can also be directed to raise the profile of health outcomes in combination with other contractual outputs.

The formation and operation of these Teams will require near-term capacity building, and activities are proposed to improve staff skills. But, the particular skills the staff should have are not yet fully developed by the Project. Senior staff are beginning to make efforts to rationalize the Project's approaches to hygiene improvement, community participation, gender mainstreaming, behavior change communication, and impact evaluation. When these are rationalized, then coherent capacity building can begin for ESP staff.

Increasing staff capacity in these core areas will enable more integrated and focused work planning. The preparation of the next annual work plan provides the opportunity for staff to develop integrated approaches to diarrhea prevention. This work plan would then be expected to guide closer integration in future Project years.

The next seven months provide ESP with the time to reflect on the enormous progress made to date and take advantage of the opportunities it has created for even greater achievement over the remaining years of the Project. The Basic Health Services Program of USAID/Indonesia was created with synergistic impact in mind, and ESP, HSP, the Food and Nutrition partners, and SWS are poised to make the synergies real. Now is the time for them to plan together how their respective strengths can best be collectively mobilized to reduce the level of debilitating diarrheal diseases and the annual unnecessary death of 100,000 young children in Indonesia.

8. APPENDICES

8.1. APPENDIX 1: SCOPE OF WORK FOR ENVIRONMENTAL HEALTH SPECIALIST – FEBRUARY 2006

8.2. APPENDIX 2: CONTACTS, DOCUMENTS, AND SCHEDULE

8.3. APPENDIX 3: POSSIBLE ACTIONS TO INCREASE HEALTH IMPACT AND INTEGRATION IN ESP, WITH HSP, AND WITH SWS

8.4. APPENDIX 4: THE F-DIAGRAM

APPENDIX 1: SCOPE OF WORK FOR ENVIRONMENTAL HEALTH SPECIALIST – FEBRUARY 2006

BACKGROUND

The Environmental Services Program (ESP) is a fifty-eight month program funded by the United States Agency for International Development (USAID) and implemented under the leadership of Development Alternatives, Inc. (DAI). ESP works with government, private sector, NGOs, community groups and other stakeholders to promote better health through improved water resources management and expanded access to clean water and sanitation services. The period of the project is from December 2004 through September 2009. ESP activities are focused on seven High Priority Integrated Provinces (HPPs): Nanggroe Aceh Darussalam, North Sumatra, West Sumatra, East Java, Central Java, West Java/DKI Jakarta, and Banten. ESP also supports a limited set of activities in four Special Imperative Areas (SCIAs), Balikpapan, Manado, Manokwari and Jayapura.

ESP is part of USAID/Indonesia's Basic Human Services (BHS) Strategic Objective (SO), which focuses on the interdependence of health and the environment, and their effect on health outcomes. USAID/BHS activities strive to improve the quality of three basic human services, water, food/nutrition and health, to improve the lives of Indonesians. ESP partners under the BHS umbrella include the Health Services Program (HSP), Safe Water Systems (SWS) and Development Assistance Program (DAP) international NGOs.

OBJECTIVES (SCOPE)

ESP takes a 'Ridges to Reefs' approach to linking water resources management with improved health. Integrated technical components include Watershed Management and Biodiversity Conservation, focusing on raw water resource conservation and rehabilitation as well as biodiversity conservation; Environmental Services Delivery, ensuring increased access to clean water and sanitation services; and Environmental Services Finance, leveraging necessary investment in infrastructure and environmental service rewards. In Aceh, ESP has a fourth technical component, Environmentally Sustainable Design and Implementation. ESP also manages cross-cutting technical support in public outreach and communications; health and hygiene communications; GIS; gender; and small grants. All of ESP's work is implemented in an integrated manner, where links are made among various technical components as well as with our USAID/BHS partners. As ESP field activities mature, ESP has growing networks of community groups, NGOs, government agencies, universities and media.

The purpose of this consultancy is to assess ESP program activities and identify concrete opportunities for maximizing the incorporation of health in these activities. ESP's message makes the link between environment and health: "ESP promotes better health through improved water resources management and increased access to clean water and sanitation services." This consultancy will ensure that this is achieved by identifying opportunities and resources for

including health messages, activities and links in all aspects of ESP work. This work will include recommendations related to ESP operations and activities, staff and partners capacity building, and integration with technical resources from but not limited to USAID/BHS partners. These recommendations will address all ESP technical components and, as relevant, cross-cutting themes. This initial assignment will likely be followed by technical assistance on adequately integrating health into ESP activities over the Life of the Project.

TASKS (PERFORMANCE REQUIREMENTS)

The proposed tasks and responsibilities of the Environmental Health Specialist are to conduct a critical review of ESP program activities and make recommendations to strengthen the linkages with health, especially for vulnerable women, children and poor families. This will be achieved through the following tasks:

Review relevant project and other documents.

Interview key staff, including but not limited to the Chief of Party (Parente), Component Advisors (Merrill, Parra and Bustraan), Regional Advisors and Public Outreach/Communication Specialists, to staff recommendations regarding priority project needs related to mainstreaming health into ESP work.

Meet with USAID/BHS staff to discuss BHS programming and to develop concepts for integrating health into ESP work.

Meet with USAID/BHS partners representing at least HSP, SWS, STAR-H and DAP to learn about programs and seek specific ways to build technical collaborations to ensure health is incorporated into ESP work.

Review USAID/BHS Health Baseline study results.

Conduct field visits and interview ESP partners representing each technical component in at least three HPPs (including Aceh), and including representation of urban, peri-urban and rural communities.

Provide presentations to ESP staff and partners to raise awareness of links between health and environment, and to highlight opportunities for building health concepts and messages into all aspects of ESP work.

DELIVERABLES

Deliverables associated with this consultancy include the following:

1. Final report, with specific recommendations to:
   1.1. Maximize program interventions between environment and health (link with water and diseases: dengue, diarrhea, hygiene promotion, etc.);
   1.2. Strengthen linkages with ESP, HSP DAP partners;
   1.3. Improve ESP's communication linkages and synergies in documents, reports, newsletters, etc.
   1.4. Due by 22 December.
2. Presentation of Final Report recommendations to ESP staff, in Jakarta and at least three HPPs, building a conceptual understanding of health and environment links, and describing specific opportunities for incorporating health into ESP programming and field activities. Due December 12-16, 2005.
3. Presentation of Final Report recommendations to USAID/BHS staff and partners (HSP, SWS, DAP). Due December 19, 2005.
4. USAID/BHS ESP CO de-briefing. Due December 20, 2005.

PROPOSED VISIT SCHEDULE:

This work will be conducted over a period of up to thirty (30) days, from November 19 through December 22, 2005.

APPENDIX 2
CONTACTS, DOCUMENTS, AND SCHEDULE

PERSONS CONTACTED

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DOCUMENTS REVIEWED

Environmental Services Program, Quarterly Report No. 2: July – September 2005
Environmental Services Program, First Annual Work Plan and Life of Project Plan
Environmental Services Program, ESP News editions 1 – 5
Environmental Services Program, Performance Monitoring Plan (PMP), December 2005
Environmental Services Program, Gender Needs Assessment, September, 2005
USAID Environmental Health Project, Assessing Hygiene Improvement: Guidelines for Household and Community Levels
USAID/Indonesia Strategic Plan 2004 – 2008, July 28, 2004
Johns Hopkins University/Center for Communication Programs, Conceptual Framework for Improving Hygiene Behaviors
Johns Hopkins University/Center for Communication Programs, Global Experience in Behavior Change Communication: presentation to ESP February 10, 2006
Safe Water System Project, Performance Monitoring Plan
Basic Human Services Baseline Household Survey in 30 Districts in Indonesia, 2005: Seminar on Result, Presentation 10 February 2005
Basic Human Services Baseline Household Survey in 30 Districts in Indonesia, 2005: Seminar on Result, Tabulated Data 10 February 2005
Basic Human Services Baseline Household Survey Questionnaire
Health Services Program, Annual Workplan: October 2005 – 2006
Health Services Program, Performance Monitoring Plan (draft 2, September 30, 2005)

CONSULTANCY SCHEDULE

Day/Date	Activity	Location	Participants
Sun-Tues, 5-7 Feb 2006	Travel to Indonesia	Economy class	McGahey
Wednesday, 8 February	Introduction with Jakarta ESP Team Partner introductions in Multi-site Selection Meeting	Jakarta	McGahey, ESP, HSP
Thursday, 9 February	WATSAN coordinators meeting Meeting with Chief of Party, SWS Project	Jakarta	McGahey, ESP regional specialists, SWS
Friday, 10 February	Discussions with ESP Regional Directors Introduction to JHU/CCP consultants	ESP Jakarta	McGahey, ESP, JHU/CCP
Saturday, 11 February	Document Review Initial characterization of situation Meeting with ESP DCOP, ESP GIS consultant	Jakarta	McGahey
Monday, 13 February	Meetings with ESP Technical Advisors – Outreach and Communications, Service Delivery, Watershed Management Meetings with ESP WSM and WATSAN regional specialists	Jakarta	McGahey, Utomo, JHU/CCP (Poppe)
Tuesday, 14 February	Situational synthesis ESP Performance Monitoring Plan review	Jakarta	McGahey, Utomo, JHU/CCP (Poppe, Figueroa), Lestari
Wednesday,15 February	Meeting with UNICEF WES Specialist Meeting with USAID/Indonesia BHS Team	Jakarta	McGahey, Utomo, Poppe, Parente (USAID only)
Thursday, 16 February	Meetings with West Java WATSAN specialist Travel to East Java Region Site visit – CB solid waste collection/handwashing	Jakarta Surabaya	McGahey, Utomo, Poppe, Lestari
Friday, 17 February	Site visits – integrated chicken slaughter/tofu preparation environmental catastrophe; school-based handwashing partnership Travel from East Java Region	Temas Malang	McGahey, Utomo, Poppe, Lestari
Saturday, 18 February	SWOT synthesis, report preparation	Jakarta	McGahey
Sunday, 19 February	Travel to North Sumatra Region	Medan	McGahey, Utomo, Poppe, Figueroa, Lestari
Monday, 20 February	Field Trip to rural project site: meeting with ESP Team and Focus Group Discussion on health and hygiene	Medan Semangat	McGahey, Utomo, Poppe, Figueroa, Lestari
Tuesday, 21 February	Field Trip to urban project site Travel to Bandung	Sunggal	McGahey, Utomo, Poppe, Figueroa, Lestari
Wednesday, 22 February	Field Trip to rural and urban project sites Travel to Jakarta	Mekarjaya Tamansari	McGahey, Utomo, Poppe, Figueroa
Thursday, 23 Feb	Presentation drafting Meetings at World Bank WSP	Jakarta	McGahey, Utomo
Friday, 24 Feb	Presentation to USAID Presentation for ESP and BHS partners	Jakarta	McGahey, Parente, Utomo, Poppe, Figueroa, Lestari
Saturday, 25 Feb	Report drafting	Jakarta	McGahey

Sunday-Monday, 26-27 Feb	Report finalization Travel to Washington, DC	Economy class	McGahey

APPENDIX 3
POSSIBLE ACTIONS TO INCREASE HEALTH IMPACT AND INTEGRATION IN ESP, WITH HSP, AND WITH SWS

Component of Project	Basic Human Services SO	Cross Cutting Themes	Cross Cutting Themes
Strategic Objective	Higher quality basic human services utilized	Higher quality basic human services utilized	Higher quality basic human services utilized
Intermediate Result		Government, communities, and the private sector mobilized to advocate for higher quality basic human services	Government, communities, and the private sector mobilized to advocate for higher quality basic human services
Task/Outcome		Leveraging other financial support for Environmental Services Program	Collaborative program to support the Strategic Objective of Basic Human Services
Indicator	Proportion of children aged 0 – 35 months who had diarrhea at any time in the two-week period prior to the survey	Level of funding to support the ESP activities	Number of integration programs between ESP and USAID programs
Health Impact Integration Opportunities	Diarrheal disease reduction - Hygiene Improvement Indicator fully shared by both HSP and SWS so coordination of related efforts in all locations is necessary		Diarrheal disease reduction – SWS market development and promotion in ESP sites
Opportunities for Integration into Activities	Promote Hygiene Improvement Framework through ESP success story newsletter.		

CAPITAL LETTERS indicate possible improvements to indicators in most recent draft of Performance Monitoring Plan

Component of Project	Cross Cutting Themes	Service Delivery	Service Delivery
Strategic Objective	Higher quality basic human services utilized	Higher quality basic human services utilized	Higher quality basic human services utilized
Intermediate Result	Government, communities, and the private sector mobilized to advocate for higher quality basic human services	Basic human services delivered AND UTILIZED effectively at the local level	Improved practices and behaviors adopted at the community and household levels
Task/Outcome	Public outreach and communication program	In Aceh, at least 20 return communities have developed and are implementing improved water quality, sanitation, and solid waste management THAT ARE CONSISTENT WITH THE REQUIREMENTS OF THE HYGIENE IMPROVEMENT FRAMEWORK	At least 5 sewage treatment proposals are developed in conjunction with local or provincial government and submitted to international development banks, such as Japanese Bank for International Credit (JBIC), for funding consideration
Indicator	(1) Number of campaigns supported by ESP, (2) number of campaigns supported by ESP partners and stakeholders, (3) number of community coverage of the campaign	Number of return communities in Aceh develop and implement improved water quality, sanitation, and solid waste management THAT ARE CONSISTENT WITH THE REQUIREMENTS OF THE HYGIENE IMPROVEMENT FRAMEWORK	Number of proposals developed and to be funded by international development bank THAT SPECIFICALLY ADDRESS THE HYGIENIC USE OF SANITARY FACILITIES BY MEN, WOMEN, AND CHILDREN UNDER THE AGE OF 5
Health Impact Integration Opportunities	(2) number of campaigns conducted as part of strategic health impact communication strategies supported by ESP partners and stakeholders	Diarrheal disease prevention - consistency with access/behavioral/enabling environment requirements of the HIF indicating	Diarrheal disease prevention – must address behaviors related to proper use by vulnerable target audiences including, at a minimum, children under the age of 5
Opportunities for Integration into Activities	Each application for small grant funds should contain an explicit description of the grant's contribution to diarrheal disease reduction or reduction of other locally important infectious diseases. Establish and increase synergies between health and hygiene program and ALL public outreach and communication activities. Update ESP Atlas to reflect diarrheal disease mortality RATES rather than mortality numbers. Highlight one section in each ESP newsletter specifically about innovative linkages for diarrheal disease prevention. Develop LQAS for local, annual evaluation of diarrheal disease reduction.		Incorporate Health and Hygiene programming into all water supply and sanitation improvements. Use any opportunity where PDAMs interface with customers – meter reading, office visits, etc – to have their staff communicate Health and Hygiene messages. Use Health & Hygiene activities to generate customers from PDAM water supply, particularly among the unserviced urban poor.

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Component of Project	Service Delivery	Watershed Management	Service Delivery
Strategic Objective	Higher quality basic human services utilized	Higher quality basic human services utilized	Higher quality basic human services utilized
Intermediate Result	Improved practices and behaviors adopted at the community and household levels	Government, communities and the private sector mobilized to advocate for higher quality basic human services.	Improved practices and behaviors adopted at the community and household level.
Task/Outcome	At least 25 Small Scale Sanitation Systems (SSSS) are developed, implemented, AND USED HYGIENICALLY. Of these a minimum of 5 community plans for restored and new facilities will be developed and implemented for return communities in Aceh CONSISTENT WITH THE REQUIREMENTS OF THE HYGIENE IMPROVEMENT FRAMEWORK	In each High Priority Province, improvement of watershed function in areas supplying water to urban centers and PDAMs as measured by a 50% increase in rehabilitated land (total area of degraded land where trees, commercial or non-commercial are planted)	The precursor needed to impact childhood diarrheal disease (clean water and sanitation) are contributed to the BHS effort to reduce in the incidence of childhood diarrheal disease and mortality [SCRATCH MORTALITY].
Indicator	Number of small scale sanitation plans developed and implemented AND USED HYGIENICALLY CONSISTENT WITH THE REQUIREMENTS OF THE HYGIENE IMPROVEMENT FRAMEWORK	Increase in area of rehabilitated land and forest, presented as percentage and in hectares	Proportion of households that adopted health and hygiene practices within ESP project sites.
Health Impact Integration Opportunities	Diarrheal disease prevention - consistency with access/behavioral/enabling environment requirements of the HIF indicating diarrhea prevention	Increased water retention increasing water supply availability. Enabling smallholder farmer to increase agricultural productivity targeted on nutrition.	(1) Handwashing at critical times - Table W21a Post-defecation (BL = 8.0%) Post-bottom cleaning (6.8%) Pre-child feeding (4.3%) Pre-food preparation (2.8%) Pre-eating (7.4%) (2) Effective water treatment – observed use of *Air Rhamat* (0.1%) Table O07 Chlorine test positive (1.6%) Table not seen in report (3) Appropriate child feces disposal (27.7%) Table C6a (4) Safe solid waste disposal (23.3%) Table H611
Opportunities for Integration into Activities	Consider application of constructed wetlands for treatment of excreta generated by institutions (e.g. schools, health centers) in upland watershed areas.	Include integration of watershed management and health as agenda item in April 2006 Site Conservation Planning Workshop to incorporate health in action planning and monitoring Design affordable household toilet/septic tank system using large volume plastic tanks in place of concrete for promotion in upper watersheds (learn from DAP partners?). Train local contractors in its installation. Ensure feces management is a part of each watershed management plan.	Schedule workshop on Hygiene Improvement for all Health & Hygiene, WATSAN, and Public Outreach and Communication staff – and appropriate HSP and SWS staff - in single location. Include other relevant topics as necessary. Schedule workshop on Hygiene Improvement in each region with all technical staff – outcome of short term implementation plans on how to incorporate Hygiene Improvement into ongoing activities.

CAPITAL LETTERS indicate possible improvements to indicators in most recent draft of Performance Monitoring Plan

Component of Project	Environmentally sound design in Aceh	Environmentally sound design in Aceh	
Strategic Objective	Higher quality basic human services utilized	Higher quality basic human services utilized	
Intermediate Result	Government, communities and the private sector mobilized to advocate for higher quality basic human services.	Government, communities and the private sector mobilized to advocate for higher quality basic human services.	
Task/Outcome	At least 4 spatial plans at the district and/or municipality levels in the Banda Aceh to Beulaboh coastal corridor directly impacted by the tsunami are developed and/or improved	A forum/network of donor, GOI and NGO water/sanitation/infrastructure/ environment/HEALTH practitioners is created and supported to address common implementation issues and to serve as a clearinghouse of best practices to mitigate adverse environmental AND HEALTH impacts of post-tsunami reconstruction activities.	
Indicator	Number of spatial plans developed and/or improved at the district and/or municipality levels THAT ADDRESS EXCRETA DISPOSAL, SAFE SOLID WASTE DISPOSAL, AND ELIMINATION OF STAGNANT WATER	Forum/network of donor, GOI and NGO established and functioning	
Health Impact Integration Opportunities	Diarrheal disease prevention – planning for safe excreta disposal Dengue fever and malaria prevention – planning for elimination of stagnant water	ESP demonstrates leadership and builds partner capacity to incorporate health concerns in infrastructure and environmental plans, implementation, monitoring, and evaluation.	
Opportunities for Integration into Activities		STTA review of all sanitation systems used by DAP partners and others engaged in Aceh rehabilitation. Explore and pilot market-based approach to improving household sanitation. Conduct appropriate exchange visit to Vietnam on market-based approaches to sanitation. Engage Refill Shop operators in promoting hygiene possibly through soap sales in conjunction with Refill (either get a Refill or a family health package…..)	

CAPITAL LETTERS indicate possible improvements to indicators in most recent draft of Performance Monitoring Plan

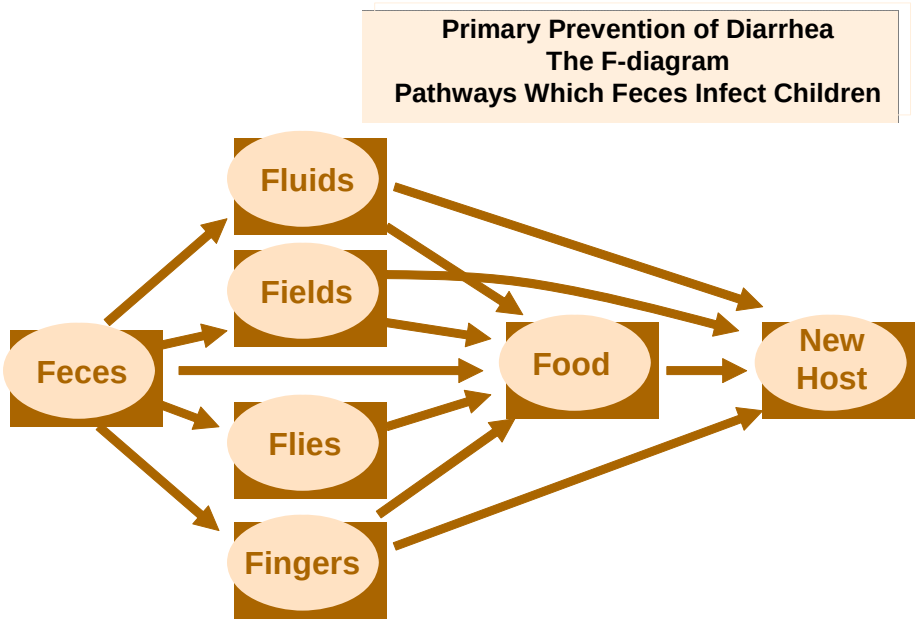
ESP contributions to HSP results and indicators

Component of Project	Basic human services delivered effectively at the local level	Improved practices and behaviors adopted at the community and household levels	Improved practices and behaviors adopted at the community and household levels
Strategic Objective	Higher quality basic human services utilized	Higher quality basic human services utilized	Higher quality basic human services utilized
Intermediate Result	Public-private partnerships to deliver essential human services developed	Communities and households adopt evidence-based healthy behaviors	Public and NGO sector BCC skills at provincial and district level improved
Task/Outcome/ Result	Increased investments in maternal and child health	Community mobilization for improved maternal, neonatal and child services increased	Improved capacity of NGO to implement BCC strategies
Indicator	Number of health care providers providing the package of essential MCH services	Number of communities or villages which have held community mobilization events about MNCH during the past 12 months	Number of NGOs and/or national coalitions implementing MNCH-related BCC activities
ESP Integration Opportunities	Diarrheal disease prevention – Ensure that diarrhea prevention is included in the "package of essential MCH services". Facilitate availability of *Air Rahmat* through health care providers for use in drinking water, formula preparation, and ORS preparation	Joint ESP/HSP mobilization efforts including messages on: (1) safe disposal of children's excreta (2) handwashing (3) exclusive breastfeeding and diarrhea prevention (4) safe water treatment and storage (5) environmental dengue fever prevention (6) other local ESP objectives	Ensure coordination of approaches taken by ESP and HSP in BCC

ESP contributions to SWS results and indicators

Component of Project	Not available		
Strategic Objective	Not available		
Intermediate Result	Not available		
Task/Outcome/ Result	Not available		
Indicator	Number of households using Air Rahmat		
ESP Integration Opportunities	If goal of non-subsidized model of commercial distribution of *Air Rahmat* is achieved, then incorporate its promotion and proper use into all diarrheal disease prevention activities Facilitate availability of *Air Rahmat* through health care providers for use in drinking water, formula preparation, and ORS preparation Identify ESP-related application of household savings generated by changing behavior from boiling drinking water boiling to using *Air Rahmat*		

APPENDIX 4
THE F-DIAGRAM



Source: Wagner and Lanois, 1958

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